

REMARKS/ARGUMENTS

Claims 1-27 are pending in this application, with claims 1, 13 and 24 being the only independent claims. Independent claims 1, 13, and 24 are amended to implement editorial corrections. Claim 18 was previously canceled.

Claims 1-17 and 19-27 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,754,656 (Nishioka) in view of U.S. Patent No. 6,209,095 (Anderson) and further in view of U.S. Patent No. 5,777,903 (Piosenka).

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief description of the subject matter described in the present application is deemed appropriate to facilitate understanding of the arguments for patentability. The description is not meant to argue unclaimed subject matter.

The present invention relates to a method for implementing commercial transactions (i.e., paying a bill and transacting business with a bank) using a mobile station. According to a specific embodiment, a local payment machine (LPM) 2 first generates an electronic form and the material to be signed, computes a hash code H1 from the material, and then transfers the material and the hash code to a mobile station (see page 5, lines 24-27; page 8, line 34 - page 9, lines 3; page 9, lines 28-31; page 10, lines 15-17; and Fig. 1 of the present application). The payment machine is any local or locally operated automated machine capable of communicating over a telecommunication network with a service provider, such as a bank, shop, or other payee (see page 7, lines 3-7). The mobile station communicates with the local payment machine using wireless technology such as Bluetooth or an infrared interface (see page 9, lines 1-10). In one specific embodiment, the mobile station is a mobile telephone (page 9, line 35). The material, i.e., the invoice form and the payee, payer, amount and reference number of the payment, is presented on a display of the mobile station

to allow the payer to check what he/she is signing (page 9, lines 32-36; and page 11, lines 14-18). If the payer agrees, the payer signs the material and hash code using the mobile station (page 9, line 36 - page 10, line 1; and page 11, lines 18-20). After the payer has signed the material and the hash code, the payment machine authenticates the material with the digitally signed hash code (page 10, lines 1-10).

Independent Claim 1

Independent claim 1 recites “computing, in the payment machine, a first hash code for the material to be signed, the material to be signed including at least one of the form, an identifier of the form, shared information, and information in essential fields of the form”, “transferring the material to be signed and the first hash code from the payment machine to the mobile station, wherein the mobile station includes a display capable of displaying at least a portion of the material to be signed or information related to the material to be signed”, and “digitally signing, by a user using the mobile station, the material and the first hash code transferred to the mobile station.”

MPEP §2143 states that to reject a claim based on the combining of prior art elements according to known methods to yield predictable results, the following criteria must be met:

(1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference;

(2) a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that in combination, each element merely performs the same function as it does separately;

(3) a finding that one of ordinary skill in the art would have recognized that the results of the combination were predictable; and

(4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The combination of Nishioka, Anderson, and Piosenka fails to provide a *prima facie* case of obviousness because the combination fails to meet at least the first criteria. None of the prior art references as interpreted by the Examiner disclose a mobile station that (1) displays a material to be signed and (2) allows the user to sign the material using the mobile station.

The Examiner has maintained the allegation that the smart card 20 disclosed by Nishioka can be considered to be the claimed mobile station and that the user site apparatus 10 of Nishioka can be considered to be the claimed payment machine. However, independent claim 1 requires that the material and the hash code be transferred from the payment machine to the mobile station and that the user uses the mobile station to digitally sign the material and the first hash code. The smart card 20 of Nishioka, like any other smart card, communicates with an external device when the smart card is inserted or connected to the external device and can not be considered a mobile station that allows “digitally signing, by a user using the mobile station, the material and the first hash code transferred to the mobile station”, as recited in independent claim 1.

According to Nishioka, a user inserts the smart card 20 into the user site apparatus 10 and utilizes the user site apparatus 10 to select items for purchase from the retail store site apparatus 30, which is connected to the user site apparatus 10 by the communication line 50 (col. 10, lines 38-43). Nishioka teaches that the user site apparatus 10 corresponds to a terminal possessed by a user in which the smart card 20 is inserted (col. 9, lines 16-20). The user then activates a document producing unit 102 on the user site apparatus 10 which produces a written order for items that the user wishes to purchase from the retail store site apparatus 30 (col. 10, lines 44-52). This written

order is sent to the smart card 20 (col. 10, lines 66-67). The smart card enciphers part of the written order P2 and sends it to the retail store site apparatus 30 via the user site apparatus 10 in which the smart card 20 is inserted (col. 11, lines 1-18). Retail store site apparatus 30 then deciphers the order (col. 11, lines 55-60). In a further embodiment, the user site apparatus generates a hash and the retail store site apparatus 30 authenticates the signed hash (see col. 14, lines 18-23).

Since the smart card of Nishioka does not include a display, the smart card 20 of Nishioka can not be considered to be the claimed mobile station, which “includes a display capable of displaying at least one of the material to be signed and information related to the information to be signed”, as recited in independent claim 1. Moreover, Nishioka also fails to disclose, teach or suggest that a document can be signed by a user using the smart card. Using the Examiner’s interpretation of Nishioka in which the smart card is considered to be the claimed mobile station, Nishioka does not disclose “digitally signing, by a user using the mobile station, the material and the first hash code transferred to the mobile station”, as expressly recited in independent claim 1.

Anderson fails to teach or suggest that which Nishioka lacks. As indicated by the Examiner, Anderson discloses a signing method for computer-based document signing which utilizes a PCMCIA card or smart card. According to Anderson, separate hashes are calculated for two sections of a document (see Fig. 35; and col. 20, lines 16-31 of Anderson). The hashed sections are placed consecutively in a message and a hash is calculated for the combined sections, which is then signed. This ensures that no third party has tampered with any of the parts of the document, i.e., the final signature ensures the authenticity of the entire document. Furthermore, Anderson discloses that the payer 12 creates the financial instrument and signs it (see, e.g., col. 23, lines 41-45). And a payee receives and validates the signature (see col. 23, lines 57-60).

In Anderson, the Examiner also considers the PCMCIA cards or smart cards to be the claimed mobile station. As described above, the claimed mobile station now expressly requires a display, which the smart cards of Nishioka and Anderson do not have. Furthermore, Anderson also fails to teach or suggest that a user can sign a document using the PCMCIA cards or smart cards. Thus, using the Examiner's interpretation of Nishioka and Anderson in which the smart card of PCMCIA card is considered to be the claimed mobile station, the combination of Nishioka and Anderson fails to disclose, teach or suggest "digitally signing, by a user using the mobile station, the material and the first hash code transferred to the mobile station", as expressly recited in independent claim 1.

The Examiner has acknowledged that the smart cards of Nishioka and Anderson do not have a display and has combined Nishioka and Anderson with Piosenka.

However, Piosenka also fails to teach or suggest what Nishioka and Anderson lack because Piosenka also fails to teach that a smart card, which the Examiner considers to be the mobile station, can be used by a user to sign an electric document on the smart card.

Piosenka relates to a solar cell powered smart card. Piosenka discloses that smart cards are powered by an external system 24 in which they are inserted. However, Piosenka notes that it is desirable to allow a user to access the information that is stored on the smart card when the card is not inserted in the external system (see col. 2, lines 38-43 of Piosenka). Accordingly, Piosenka discloses a solar powered smart card 50 with a photovoltaic cell 52 and a display 28 which allows a user to access information on the smart card when the smart card 50 is not connected to an external system 24 to insure that a particular transaction was performed correctly or to access an account balance and other information on the smart card (see col. 3, lines 23-35 of Piosenka). The only function disclosed by Piosenka that a user can perform using the smart card is to access and check

information stored on the smart card. The other functions of the smart card are performed when the smart card is connected to the external system. There is no teaching or suggestion in Piosenka that a user can sign material using the smart card.

Accordingly, the Examiner's proffered combination of Nishioka, Anderson, and Piosenka, in which a smart card is considered to be the claimed mobile station, fails to disclose, teach or suggest "digitally signing, by a user using the mobile station, the material and the first hash code transferred to the mobile station", as expressly recited in independent claim 1.

In view of the above remarks, independent claim 1 is deemed to be allowable over the cited art.

Independent Claims 13

Independent claim 13 is drawn to a system and recites "the mobile station includes a display and comprises signing means for allowing a user using the mobile station to sign the material and the first hash code transferred into the mobile station, the display being capable of displaying at least a portion of the material to be signed or information related to the material to be signed." Amendments herein to the above recitation of independent claim 13 have been made to expressly recite that the user signs material using the mobile station. Support for this is found in independent claim 1 and at page 9, line 36 - page 10, line 1; and at page 11, lines 18-20 of the application as originally filed.

As stated above, the Examiner alleges that the smart card 20 of Nishioka is the claimed mobile station. As explained in detail above, the combination of Nishioka, Anderson, and Piosenka fail to disclose a smart card that allows the user to sign material in the smart card using the smart card.

Accordingly, independent claim 13 should be allowable over Nishioka, Anderson, and Piosenka, for the same reasons as is independent claim 1.

Independent claim 24

Independent claim 24 includes limitations that are similar to the limitations of independent claim 1 and is also allowable over the combination of Nishioka, Anderson, and Piosenka for the same reasons as is independent claim 1.

Independent claim 24 further recites “creating, in a local payment machine of the payee, an electronic form.” Thus, according to claim 24 the payment machine is owned by the payee and is not controlled by the user.

The Examiner’s rejection fails to provide a *prima facie* case of obviousness because in the Examiner’s proffered combination, the Examiner considers the user site apparatus 10 of Nishioka to be the claimed payment machine. However, as explained above, the user site apparatus 10 of Nishioka is a terminal that the user possesses (see col. 9, lines 15-16 of Nishioka). Thus, Nishioka’s user site apparatus 10 possessed by a user can not be considered “a local payment machine of the payee”, as recited in independent claim 24.

Accordingly, independent claim 24 is deemed to be allowable over Nishioka, Anderson, and Piosenka.

Dependent Claims

Dependent claims 2-12, 14-23, and 25-27 are allowable for the same reasons described above with respect to independent claims 1, 13, and 24, as well as for the additional recitations contained therein.

Dependent claims 25-27 each expressly recite that “the mobile station is a mobile telephone.” The Examiner alleges that this is obvious in view of col. 32, lines 55-67 in Anderson. However, this Examiner-cited section of Anderson merely discloses that large scale processors, such as Atalla or Racal Guardata boxes, can be used instead of PCMCIA cards if capacities of the card are exceeded. These processor boxes referred to by Anderson are hardware components that are typically connected by a hardwire connection to a system or network and therefore can not be considered to be mobile telephones.

Accordingly, the combination of Nishioka, Anderson, and Piosenka fails to disclose, teach, or suggest the limitations of claims 25-27.

In view of the above amendments and remarks, the application is now deemed to be in condition for allowance, and early notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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